Amendments to the Claims

1. *(Currently Amended)* A coil comprising

a layer of permeable material ~~(4)~~ deposited in a chip ~~(CH)~~ of an integrated circuit ~~(IC)~~ in a plane substantially parallel to a surface ~~(A)~~ of a substrate ~~(1)~~ of the chip ~~(CH)~~,

a first conductor element ~~(6a, 6b; BW10, BW11; 60a, 60b)~~ arranged at a first side of the permeable material (4) facing away from the substrate ~~(1)~~,

a second conductor element ~~(2a, 2b; T1, T2)~~ arranged at a second side of the permeable material ~~(4)~~ opposite to the first side,

an interconnection ~~(8a, 8b; P2, P4)~~ for interconnecting a first end of the first conductor element ~~(6a, 6b; BW10, BW11; 60a, 60b)~~ and a first end of the second conductor element ~~(2a, 2b; T1, T2)~~, wherein the interconnection ~~(8a, 8b; P2, P4)~~, the first conductor element ~~(6a, 6b; BW10, BW11; 60a, 60b)~~ and the second conductor element ~~(2a, 2b; T1, T2)~~ are arranged for forming a winding around the permeable material ~~(4)~~, the winding extending in a plane substantially perpendicular to the surface ~~(A)~~ of the substrate ~~(1)~~.

2. *(Currently Amended)* A coil as claimed in claim 1, wherein the first conductor element ~~(6a, 6b; BW10, BW11; 60a, 60b)~~ is part of the integrated circuit ~~(IC)~~.

3 *(Currently Amended)* A coil as claimed in claim 2, wherein the first conductor element ~~(6a, 6b; BW10, BW11; 60a, 60b)~~ comprises a bond wire ~~(BW10, BW11)~~.

4. *(Currently Amended)* A coil as claimed in claim 2, wherein the first conductor element ~~(6a, 6b; BW10, BW11; 60a, 60b)~~ comprises a conductive track ~~(60a, 60b)~~ on the chip ~~(CH)~~.

5. *(Currently Amended)* A coil as claimed in claim 1, wherein the second conductor element ~~(2a, 2b; T1, T2)~~ comprises a conductive track ~~(2a, 2b)~~ on the chip ~~(CH)~~ and is arranged between the permeable material ~~(4)~~ and the substrate ~~(1)~~.

6. *(Currently Amended)* A coil as claimed in claim 1, wherein the second conductor element ~~(2a, 2b; T1, T2)~~ comprises a conductive track ~~(T1, T2)~~ arranged on a printed circuit board ~~(PCB)~~ for carrying the integrated circuit ~~(IC)~~.

7. *(Currently Amended)* A coil as claimed in claim 1, wherein

a plurality of first conductor elements ~~(6a, 6b; BW10, BW11; 60a, 60b)~~ is arranged at a first side of the permeable material ~~(4)~~ facing away from the surface ~~(A)~~ of the substrate ~~(1)~~,

a plurality of second conductor elements ~~(2a, 2b; T1, T2)~~ is arranged at a second side of the permeable material ~~(4)~~ opposite to the first side, and

a plurality of interconnections ~~(8a, 8b; P2, P4)~~ being arranged for interconnecting the plurality of first conductor elements ~~(6a, 6b; BW10, BW11; 60a, 60b)~~ and the plurality of second conductor elements ~~(2a, 2b; T1, T2)~~ in a chain, wherein the interconnections ~~(8a, 8b; P2, P4)~~, the first conductor elements ~~(6a, 6b; BW10, BW11; 60a, 60b)~~ and the second conductor elements ~~(2a, 2b; T1, T2)~~ are arranged for forming a winding around the permeable material ~~(4)~~ for conducting current (i) in turns of the winding being substantially perpendicular to the surface ~~(A)~~.

8. *(Currently Amended)* A coil as claimed in claim 7, wherein the first conductor elements ~~(6a, 6b; BW10, BW11; 60a, 60b)~~ are arranged substantially in parallel.

9. *(Currently Amended)* A coil as claimed in claim 7, wherein the second conductor elements ~~(2a, 2b; T1, T2)~~ are arranged substantially in parallel.

10. *(Currently Amended)* A coil as claimed in ~~claim 1 or 7~~claim 1, wherein the coil, when energized, generates a magnetic field ~~(B)~~ having a direction substantially parallel with the surface ~~(A)~~.

11. *(Currently Amended)* A coil as claimed in ~~claim 1 or 7~~claim 1, wherein the coil is arranged for being most sensitive for a magnetic field component ~~(B)~~ having a direction parallel with the surface ~~(A)~~.

12. *(Currently Amended)* An integrated circuit ~~(IC)~~ comprising:

the chip ~~(CH)~~ with a substrate ~~(1),~~ the layer of permeable material ~~(4)~~ deposited in the plane substantially parallel to the surface ~~(A)~~ of the substrate ~~(1),~~ and the first conductor element ~~(6a, 6b; BW10, BW11; 60a, 60b)~~ arranged at the first side of the permeable material ~~(4)~~ facing away from the substrate ~~(1),~~

the second conductor element ~~(2a, 2b; T1, T2)~~ arranged at the second side of the permeable material ~~(4)~~ opposite to the first side, and

the interconnection ~~(8a, 8b; P2, P4)~~ for interconnecting the first end of the first conductor ~~(6a, 6b; BW10, BW11; 60a, 60b)~~ and the first end of the second conductor element ~~(2a, 2b; T1, T2),~~ wherein the interconnection ~~(8a, 8b; P2, P4)~~, the first conductor element ~~(6a, 6b; BW10, BW11; 60a, 60b)~~ and the second conductor element ~~(2a, 2b; T1, T2)~~ are arranged for forming the winding around the permeable material ~~(4),~~ turns of the winding extending in a plane substantially perpendicular to the surface ~~(A)~~ of the substrate ~~(1)~~ to form a coil as claimed in claim 1.

13. *(Currently Amended)* An integrated circuit as claimed in claim 12, wherein the chip ~~(CH)~~ further comprises:

the second conductor element ~~(2a, 2b; T1, T2)~~ being deposited on the substrate ~~(1),~~ and

an isolating layer ~~(3)~~ for isolating the second conductor element ~~(2a, 2b; T1, T2)~~ from the permeable material ~~(4),~~ the permeable material ~~(4)~~ being deposited as a layer on the isolating layer ~~(3).~~

14. *(Currently Amended)* An integrated circuit as claimed in claim 12, wherein the first conductor element ~~(6a, 6b; BW10, BW11; 60a, 60b)~~ comprises a bond wire ~~(BW10, BW11).~~

15. *(Currently Amended)* An integrated circuit as claimed in claim 12, wherein the first conductor element ~~(6a, 6b; BW10, BW11; 60a, 60b)~~ comprises a conductive track ~~(2a, 2b)~~ on the chip ~~(CH),~~ the chip ~~(CH)~~ further comprises an isolating layer ~~(5)~~ arranged in-between the permeable material ~~(4)~~ and the first conductor element ~~(6a, 6b; BW10, BW11; 60a, 60b).~~

16. *(Currently Amended)* An arrangement of an integrated circuit ~~(IC)~~ and a printed circuit board ~~(PCB)~~ for forming a coil as claimed in claim 1, wherein

the integrated circuit ~~(IC)~~ has at least one electrical conductive connection ~~(P1, P2, P3, P4)~~ with the printed board ~~(PCB),~~

the chip ~~(CH)~~ comprises the layer of the permeable material ~~(4),~~

the first conductor element ~~(6a, 6b; BW10, BW11; 60a, 60b)~~ is arranged at a first side of the permeable material ~~(4)~~ facing away from the substrate ~~(1),~~

the second conductor element ~~(2a, 2b; T1, T2)~~ is arranged on the printed circuit board ~~(PCB),~~ and

the interconnection ~~(8a, 8b; P2, P4)~~ between the first conductor element ~~(6a, 6b; BW10, BW11; 60a, 60b)~~ and the second conductor element ~~(2a, 2b; T1, T2)~~ is made via the electrical conductive connection ~~(P2, P4).~~

17. *(Original)* An electronic apparatus comprising a coil as claimed in claim 1.

18. *(Original)* An electronic apparatus as claimed in claim 17 being a tag.

19. *(Currently Amended)* A two-dimensional antenna comprising:

a coil as claimed in claim 1, and

a further coil comprising a conductor arranged around the layer of permeable material ~~(4)~~ in a plane substantially parallel to the surface, wherein the layer of permeable material ~~(4)~~ forms a core for both the first mentioned coil and the further coil.